

## SUTURE OF THE SPLEEN FOR TRAUMATIC HÆMORRHAGE.

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IN the November number of the ANNALS OF SURGERY, 1904, there appeared an article, by Williams, of Chicago, entitled "Penetrating Wounds of the Chest perforating the Diaphragm and involving the Abdominal Viscera." In this report he states that his case is the only successful one of suture of the spleen for traumatic haemorrhage reported in this country, except the one of Tiffany, of Baltimore, in 1894.

Two days after performing the operation described below, the above article was first noticed. It seems fitting that this third case should be added to the list, inasmuch as the cases seem to be of such rare occurrence.

The patient, R. W., male, aged twenty-four years, was admitted to Lakeside Hospital, November 11, 1904, with a history of having received two stab-wounds in the left side while engaged in a scuffle with a fellow-workman. The wounds were inflicted with a candy-maker's knife which had two blades set in a heavy handle.

The case was operated upon during the service of Dr. G. W. Crile, Associate Surgeon, and by his permission was intrusted to my care.

Examination on admission, one half-hour after injury:

Mucous membranes, anaemic.

Skin cool, covered with perspiration.

Temperature, 98.3° F.

Pulse, 120; regular, small volume.

Respiration, 30; some dyspnoea.

Head and neck, normal.

*Thorax.*—Inspection revealed a wound two centimetres in length in the ninth interspace in the left midaxillary line through which protruded a portion of tissue three centimetres in length. This tissue had the appearance of omentum. The skin wound was two centimetres above the intercostal wound (apparently due to the direction of the blow, so that the skin acted as a valve. When the skin was retracted, air would rush into the pleural cavity upon inspiration and be expelled synchronous with expiration. The amount of haemorrhage from this wound was slight. Percussion revealed a small area of dulness, three centimetres in diameter. A second wound was found in the eleventh interspace directly below the first wound. A tag of omentum six centimetres in length was protruding from this wound, and just below it was an area of distinct dulness. A slow but apparently increasing amount of bright red blood was oozing from this wound.

Heart and lungs, normal.

Abdomen, normal in appearance.

*Operation.*—Under ether anaesthesia the area about wounds was cleansed and digital examination was made. The upper wound was found to extend into the pleural cavity, but did not apparently involve the lung. Through this wound the diaphragm could be palpated, and it was found to be cut away from its costal attachment for a distance of six centimetres. When a finger was inserted into the lower wound, it met the finger inserted in the upper wound. The tags of tissue were found to be omentum, and, in order to avoid chance of infection from this source, the tags were cut off with plain catgut, and the stump of the upper tag of omentum was returned to the abdominal cavity through the opening in the diaphragm. The lower wound was enlarged downward and forward for a distance of six centimetres, and it was apparent that there was a very active hemorrhage in this region. After sponging out the excess of blood, a portion of what appeared to be a cut spleen was seen. This was seized with a haemostat and carefully drawn as far as possible to the wound. In one portion of the cut surface a spurting artery was found and clamped.

Further examination proved the organ to be the spleen, which showed a cut four centimetres in length extending almost through its substance somewhat obliquely to the long axis in its upper third. The cut surfaces were brought in apposition by mattress

sutures of plain catgut No. 2 on a curved, round needle. This seemed to be sufficient to control the haemorrhage. The diaphragm was then sewed to its original attachment by interrupted sutures of chromic gut No. 3. A small cigarette drain was inserted in both wounds. The operation was accomplished without resecting a rib. The lower wound was approximated by through-and-through sutures of silkworm gut, leaving simply sufficient room for drainage.

The patient's condition at the end of the operation was fairly good, though the pulse was considerably weaker.

The week following the operation, there was a small amount of discharge of blood and débris from the wound, but no active haemorrhage. On the seventh day, temperature, pulse, and respirations were normal. At the end of the second week the wound closed. Patient was in a wheel-chair on the nineteenth day and went home on the twenty-third day.

On December 18, two weeks after the patient left the hospital, he wrote saying that he was feeling as strong as usual.

The patient was examined by the writer on March 28, 1905. The scars were very solid, and the general condition apparently excellent. Patient is able to work at his trade (candy-making) regularly, although the work is laborious.